AMENDMENT - Claims

Listing of Claims

No Admission. The claims presented below are labeled pursuant to the request of the Patent and Trademark Office for convenience in examination. The reference to a claim as having been cancelled or amended is not an admission that the claim was cancelled or altered for any reason related to patentability.

Please enter the following claim amendments. This Listing of Claims will replace all prior versions, and listing, of claims in this application.

1. (originally presented) A method of detecting and localizing a cell-specific antigen in a mammal comprising the steps of:

(a) obtaining peripheral blood mononuclear cells from said mammal,

(b) exposing said peripheral blood mononuclear cells to a peptide that displays an immunogenic epitope of said cell-specific antigen under conditions such that T lymphocytes in said peripheral blood mononuclear cells undergo antigen-specific activation, thereby producing antigen-specific T lymphocytes that bind to said cell-specific antigen;

(c) labeling said antigen-specific T lymphocytes with a label that is detectable by imaging, thereby producing labeled antigen-specific T lymphocytes,

(d) administering said labeled antigen-specific T lymphocytes to said mammal, and

(e) determining the distribution of said labeled antigen-specific T lymphocytes in said mammal by imaging, thereby detecting and localizing said cell-specific antigen in the mammal.

2. (originally presented) The method of Claim 1 wherein the step (b) of exposing said peripheral blood mononuclear cells to said peptide is performed in the presence of interleukin-2 (IL-2).

3. (originally presented) The method of Claim 1 wherein the step (b) of exposing said peripheral blood mononuclear cells to said peptide is performed by adding a cell-free

preparation of said peptide to said peripheral blood mononuclear cells and without adding additional cells to said peripheral blood mononuclear cells prior to step (d) of administering said labeled antigen-specific T lymphocytes to said mammal.

4. (originally presented) The method of Claim 1 wherein said antigen-specific T lymphocytes are cytolytic for cells that express said cell-specific antigen.

5. cancelled

6. (originally presented) The method of Claim 1 wherein said antigen-specific T lymphocytes comprise CD8+ lymphocytes.

7. cancelled

8. cancelled

9. (originally presented) The method of Claim 1 wherein step (d) of administering said labeled antigen-specific T lymphocytes to said mammal is performed without administering IL-2 to said mammal with said T lymphocytes or thereafter before performing step (e) of determining the distribution of said labeled antigen-specific T lymphocytes in said mammal.

10. (originally presented) The method of Claim 1 wherein step (d) of administering said labeled antigen-specific T lymphocytes to said mammal comprises administering said lymphocytes intraperitoneally.

11. (originally presented) The method of Claim 1 wherein step (d) of administering said labeled antigen-specific T lymphocytes to said mammal comprises administering said lymphocytes intravenously.

12. (originally presented) The method of Claim 11 wherein administering said lymphocytes intravenously comprises administering a glycoconjugate to said mammal

such that said trafficking of said lymphocytes is altered compared to administering said lymphocytes without administering said glycoconjugate to said mammal.

13. (originally presented) The method of Claim 11 wherein administering a glycoconjugate comprising administering a glycoconjugate comprises administering asialoorosomucoid.

14. (originally presented) The method of Claim 11 wherein administering a glycoconjugate comprising administering a glycoconjugate comprises administering orosomucoid.

15. (originally presented) The method of Claim 1 wherein said method wherein said cell-specific antigen is a tumor-specific antigen.

16. (originally presented) The method of Claim 10 wherein said peptide displays an epitope of human mucin 1 (MUC-1).

17. cancelled

18. cancelled

19. (originally presented) The method of Claim 13 wherein said peptide has the amino acid sequence GSTAPPAHGVTSAPDTRPAP.

20. (originally presented) The method of Claim 1 wherein said label is selected from the group consisting of a gamma emitter, a positron emitter, a magnetic material, a density based contrast material, and mixtures thereof.

21. (originally presented) The method of Claim 20 wherein said label is a gamma emitter selected from the group consisting of indium-111, technetium-99m, technetium-99, iodine-123, and mixtures thereof.

22. (originally presented) The method of Claim 21 wherein the label is indium-111.

23. (originally presented) The method of Claim 1 wherein said imaging is selected from the group consisting of radioimaging, magnetic resonance imaging, positron emission tomographic and X-ray computed tomographic imaging.

24. (originally presented) The method of Claim 23 wherein said imaging is selected from the group consisting of a single scan and serial scans.

25. (originally presented) The method of Claim 23 wherein said imaging comprises a total body scan of said mammal.

26. (originally presented) The method of Claim 23 wherein said imaging comprises at least two separate scans wherein each of said separate scans is selected from the group consisting of positron emission tomographic and X-ray computed tomographic imaging.

27. (originally presented) The method of Claim 26 wherein imaging data obtained from two or more separate scans are compared.

28. (originally presented) The method of Claim 26 wherein imaging data obtained from two or more separate scans are fused into a single display image.